

CLAIMS

1. An electric motor including a rotor with a generally cylindrical rotor wall and a plurality of magnetic field producing elements mounted on an inside surface of the rotor wall, the rotor being mounted for rotation around a central stator, wherein the magnetic field producing elements are mounted on the rotor wall by means of a plurality of resilient retaining members, at least one resilient retaining member being located between and engaging with edges of two adjacent magnetic field producing elements, said edges of the magnetic field producing elements extending generally parallel to an axis of rotation of the rotor, the resilient retaining member being elastically deformed so as to exert a retaining force on the magnetic field producing elements.
2. An electric motor according to claim 1 wherein the motor is an electrically commutated motor.
3. An electric motor according to claim 1 or 2 wherein the magnetic field producing elements are permanent magnets
4. An electric motor according to any preceding claim wherein the edge portions of the magnetic field producing elements are shaped to conform to the shape of the resilient retaining member.
5. An electric motor according to any preceding claim wherein each resilient retaining member includes a first and a second portion each with a first edge and an opposite second edge, the two portions being joined along their first edges and inclined relative to one another at an angle of between 0 and 90°.

6. An electric motor according to claim 5 wherein each resilient retaining member is arranged with the second edges of the first and second portions directly adjacent to the rotor wall, and the first portion engaging with a first magnetic field producing element and the second portion engaging with a second adjacent magnetic field producing element.
7. An electric motor according to any preceding claim wherein each resilient retaining member is a roll-pin.
8. An electric motor according to any preceding claim wherein the magnetic field producing elements are elongate and arranged with their longitudinal axes generally parallel to the axis of rotation of the rotor wall.
9. An electric motor according to claim 8 wherein each resilient retaining member is elongate and is arranged with its longitudinal axis generally parallel to the longitudinal axes of the magnetic field producing elements.
10. An electric motor according to claim 9 wherein each resilient retaining member extends along substantially the entire length of the magnetic field producing elements.
11. A method of assembling a rotor for an electric motor, the rotor being adapted in use to rotate about an axis of rotation, the method including the steps of positioning two magnetic field producing elements against an inside surface of a cylindrical wall of the rotor, inserting a resilient retaining member between edges of the two magnetic field producing elements which extend generally parallel to the axis of rotation of the rotor, the resilient retaining member being elastically deformed during insertion such that once in place it exerts a retaining force on the magnetic field producing elements.